

## REMARKS

### Amendment to the specification

The related applications have been added to the first page, first paragraph of the specification. No new matter has been added.

### Claim Status and Issue of Withdrawn Claims

Claims 1-50 are pending in this application. Of these, Claims 6 and 31-49 were withdrawn from consideration and Claims 1-5, 7-30, and 50 are currently under consideration. Claims 1-47, and 50 are canceled herein and Claims 51-146 added herein.

New Claims 51-83 are directed to an oil-in-water emulsion and its associated use, wherein, amongst other features, the lipophilic core includes at least one pharmacologically inert nonpolar lipid and at least one lipophilic contrast agent. New Claims 84-119 are directed to an oil-in-water emulsion, wherein, amongst other features, up to 10% (w/v) of the emulsion is an amphipathic or polar lipid. New Claims 120-146 are directed to an oil-in-water emulsion, wherein, amongst other features, the lipophilic core includes at least one lipophilic radiologic contrast agent.

Former Claim 6, which corresponds to present Claim 57, appears to have been inadvertently withdrawn by the Examiner. As Examiner has noted, Applicants previously elected “triolein” of the non-polar lipids (see Claim 5) for search purposes. Referring to Claim 57, which is dependent on Claim 56, an oil-in-water emulsion is claimed “wherein the triglyceride is a biocompatible oil of animal or vegetable origin.” Triolein is one such triglyceride, being found in abundance in olive oil, amongst other sources. As such, Applicants believe Claim 57 should be considered in the instant application.

### Double Patenting

Former Claims 1-5 were rejected on the grounds of nonstatutory obviousness-type double patenting (“ODP”) over claims 1-4 of U.S. Patent #6,645,463. It is Applicants’ belief that this rejection is rendered moot by the claim amendments made herein. As such, withdrawal of the rejection is respectfully requested.

### Claim Objections

In the December 8th, 2006 Office Action, Former Claims 9-13 were found to be allowable but for their dependency on a rejected base claim. As such, Applicants have rewritten Former Claims 1-30 to

incorporate the limitations of Former Claim 10, which depended directly on Former Claim 1 with no intervening claims. These claims are now presented as Claims 51-82. Withdrawal of the claim objections is therefore respectfully requested.

**Rejection under 35 U.S.C. §112, 1st ¶**

Former Claims 25-26 were rejected under 35 U.S.C. §112, first paragraph, as allegedly lacking enablement commensurate with claim scope based on Examiner's interpretation of the phrase "to prevent oxidation." It is Examiner's position that an antioxidant cannot technically prevent oxidation, which he has construed to mean that oxidation *never* occurs. According to the Columbia Encyclopedia, however, an antioxidant is defined as "a substance that prevents or slows the breakdown of another substance by oxygen." In the interests of expediting prosecution and improving technical clarity, Applicants have substituted all instances of the phrase "to prevent oxidation" in the claim set with "to inhibit oxidation." As such, withdrawal of the rejection is respectfully requested.

**Rejection under 35 U.S.C. §112, 2nd ¶**

Former Claims 1-5, 17-29, and 50 were rejected under 35 U.S.C. §112, second paragraph, for certain alleged ambiguities. To avoid any confusion over what is being derivatized, present Claim 51 ( $\approx$  Former Claim 1) has been written to recite an oil-in-water emulsion with "the monolayer including an emulsifier, a derivatized polyethylene glycol, and a sterol." As indicated by dependent Claim 78, the term "derivatized polyethylene glycol" is understood to also encompass a specie having a linked lipid.

In response to Examiner's question, Applicants confirm that the parameters as recited in the claims are intended as such, with the mean particle diameter of the oil phase being between 50 to 150 nm and at least 98% of the particles being between 50 to 250 nm. Applicants respectfully note that these two conditions are logically consistent. To explain, the mean is an average of values; it does not necessarily reveal the range of values in the set. As such, a group of particles could have a mean particle diameter of 145 nm, for instance, yet contain no particles with a diameter between 50 to 250 nm. For example, 50% of the particles could be 30 nm in diameter and 50% being 260 nm in diameter. The import of the recited conditions should therefore be apparent in light of the foregoing explanation.

Applicants are puzzled by Examiner's issue with the terms "lipophilic agent" and "lipophilic derivatives of water-soluble agent," both of which are readily understood by those of ordinary skill in the art. Examiner's request for particular examples of such lipophilic agents goes to the issue of support for the claim rather than the metes and bounds of the claim under 35 U.S.C. §112, 2nd ¶. This having been said, Applicants wish to refer Examiner to the specification, which provides examples of lipophilic agents, such as iodinated or fluorinated triglycerides, perfluorinated lower alkyls, monobrominated perfluorocarbons, *etc.* See, *inter alia*, lines 5-12, pg. 5 and line 19, pg. 5 to line 26, pg. 6 of the specification. Likewise, the term "lipophilic derivatives of water-soluble contrast agents" is clearly understood and the manner of making such lipophilic derivatives well known in the art. See, *inter alia*, lines 5-12, pg. 5 of the specification. For improved technical clarity, new Claim 51 has been written to recite an oil-in-water emulsion having a lipophilic core including "at least one lipophilic contrast agent," with the understanding that the term "lipophilic contrast agent" encompasses a water-soluble contrast agent derivatized with a lipophilic moiety. See Claim 54.

To expedite prosecution, Applicants have eliminated the phrase, "which is diagnostically or therapeutically active or inactive," from the independent claims and will not comment on the merits of this aspect of the rejection.

In light of the foregoing, withdrawal of the rejection is respectfully requested.

**Rejection under 35 U.S.C. §102**

Former Claims 1-5, 7, 8, 14-17, 19-22, 27-30, and 50 are rejected under 35 U.S.C. §102(b) as being anticipated by Wheeler et al. Applicants respectfully traverse this rejection in light of the claim amendments and for the following reasons.

In setting the stage for a 102 analysis, "(a) claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The present invention is directed to a surface-modified lipoprotein-like oil-in-water emulsion "in a non-ionic aqueous phase," which is significant to the stability of the emulsion over time. In contrast, Wheeler et al. uses an ionic buffer, namely HBSS (HEPES-buffered saline solution), to make the emulsions disclosed therein. See section entitled Preparation of Emulsion, Col. 1, pg. 1559 of Wheeler et al. In light of the foregoing, Wheeler et al. fails to teach every limitation of our claims.

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Additionally, Applicants have rewritten Former Claims 1-30 and 50 to incorporate the limitations of Former Claim 10, which was found to be allowable and depended directly on Former Claim 1 with no intervening claims. These claims are now presented as Claims 51-82 and 146, respectively. As such, withdrawal of the rejection is respectfully requested.

### CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

Should the Examiner have any continuing objections, the Applicants respectfully ask the Examiner to contact the undersigned at 415-442-1490 (direct line) in order to expedite allowance of the case. Authorization is granted to charge any outstanding fees due at this time for the continued prosecution of this matter to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (matter no. 066254-5003-US01).

Respectfully submitted,

Date: June 8, 2007 By:

  
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